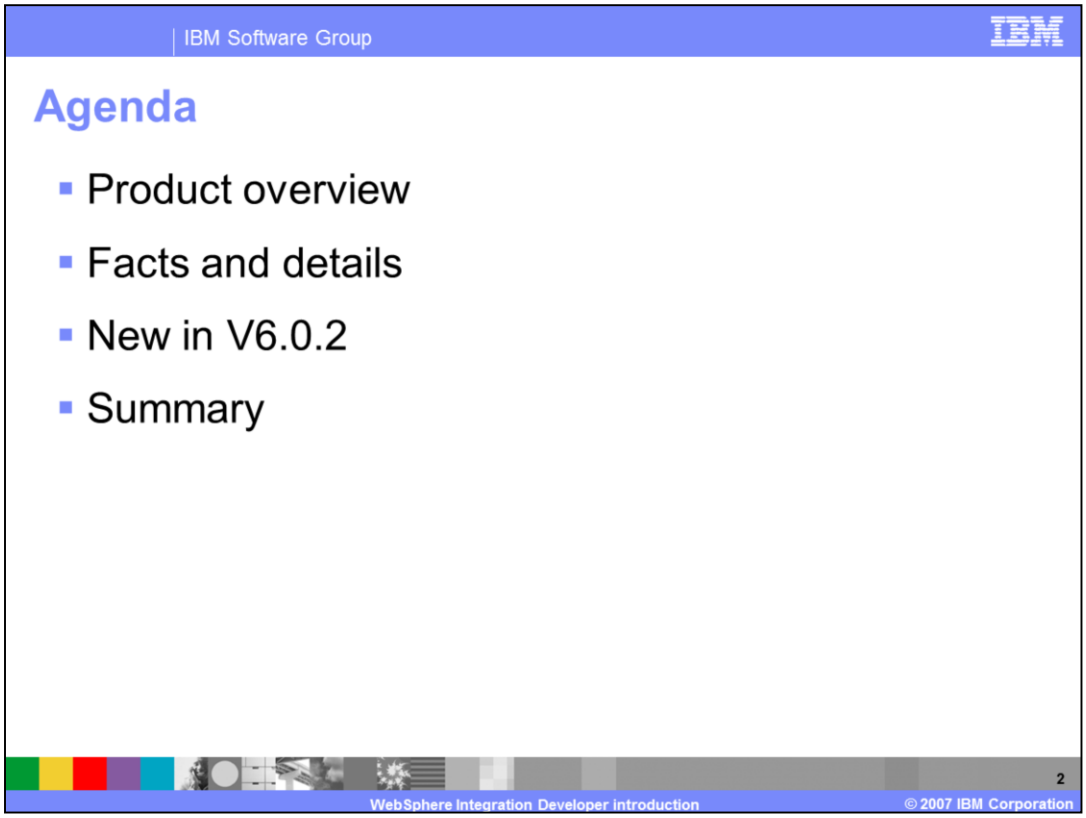
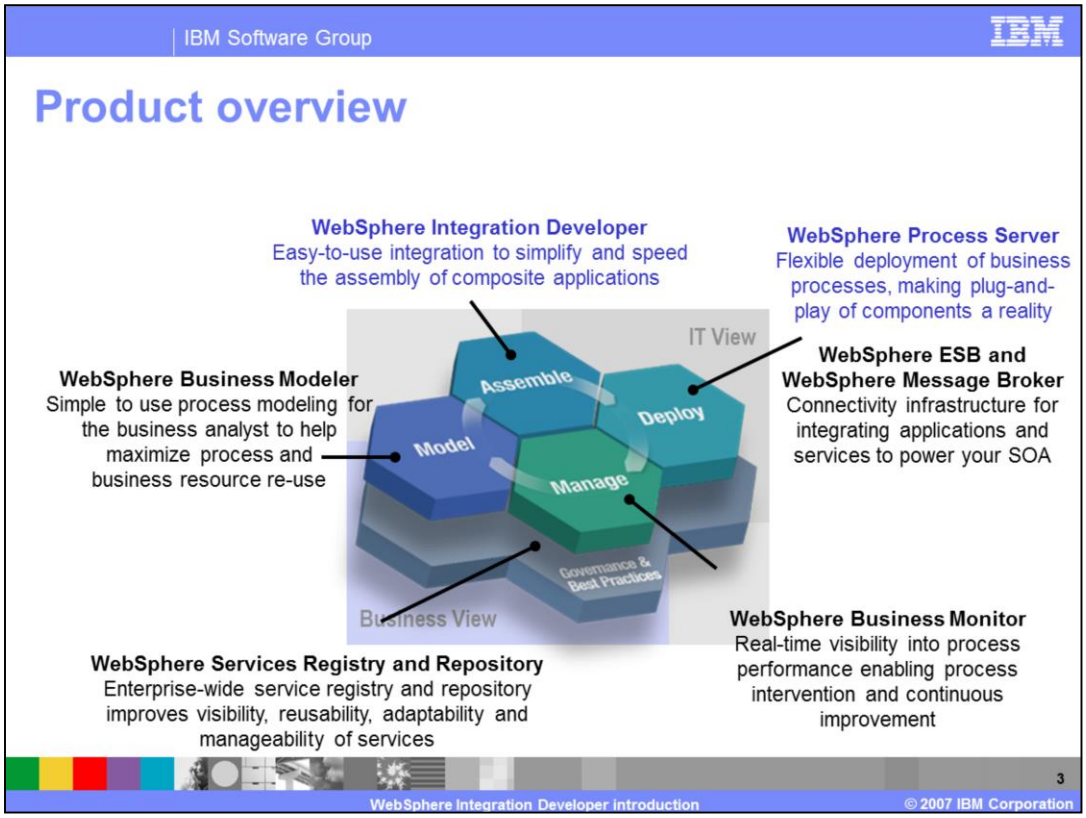
This WebSphere® Integration Developer presentation is part of the SAP integration workshop. This presentation will give you a brief overview about WebSphere Integration Developer V6.0.2. There are no specific SAP related integration options included in WebSphere Integration Developer, but it is a tool used to create business processes leveraging the SAP adapters.

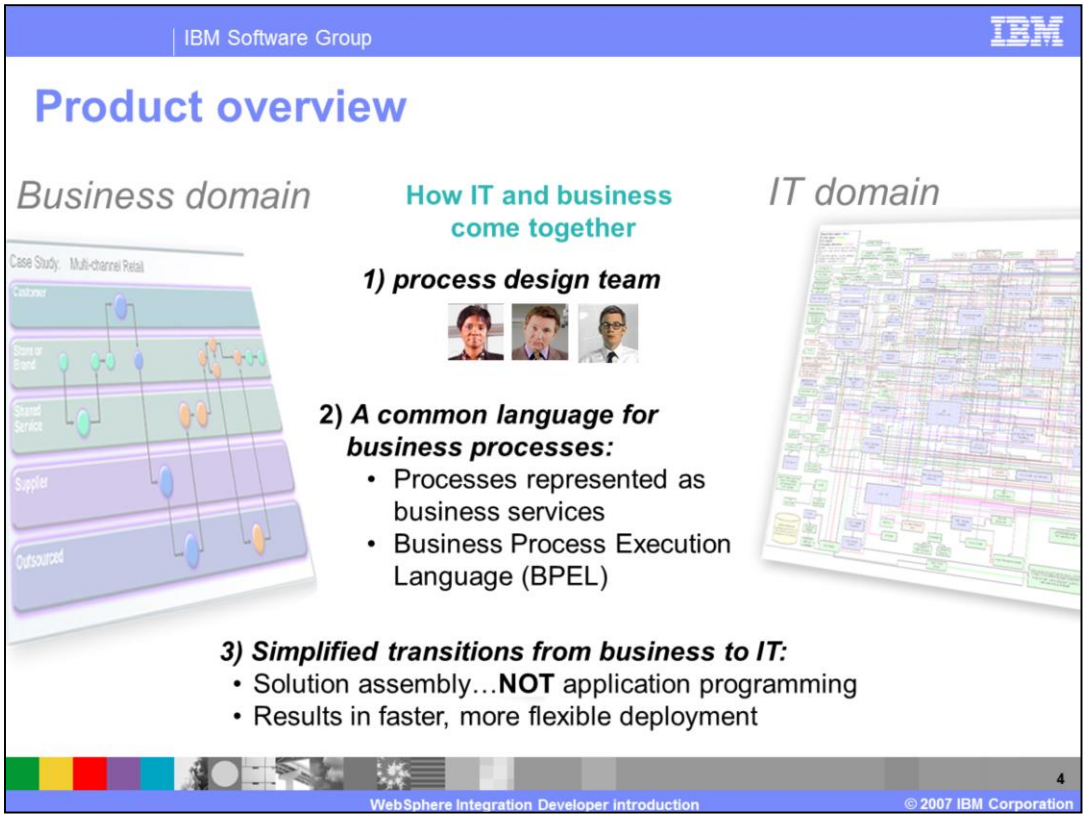


This presentation will start with a general product overview followed by some facts and details. The new features in version 6.0.2 are introduced.



This product overview illustrates where the WebSphere Integration Developer fits in the IBM life cycle model.

With the WebSphere Integration Developer, composite applications are assembled to run on the WebSphere Process Server.



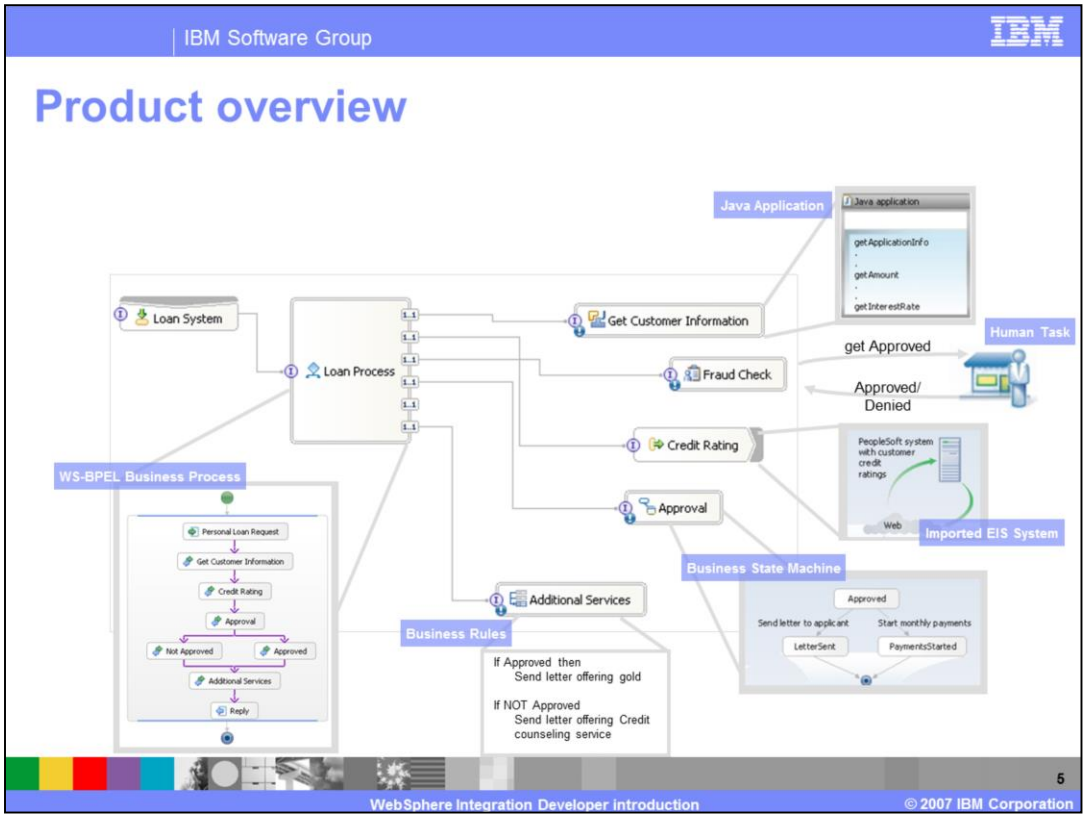
To close the gap between the business domain and the IT domain there are different aspects that could help.

First, an established team of process experts with some knowledge in both areas is very helpful.

The second aspect gets more technical with a common language to define business processes in modeling and execution.

The third aspect is the tools-based transition from business to IT. To achieve that, a tool is needed where the solution can be easy assembled and does not need complex programming. So both worlds have a common discussion view and the result can be achieved even faster.

This tool is the WebSphere Integration Developer; it is most powerful in combination with the WebSphere Business Modeler.



This is a view on the graphical representation of the different supported components.

<click>

A BPEL process can be created with the different steps and calls to external systems.

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A Java application can be coded and easily connected to the other components. For example, A human task can be defined to approve a single step using a WebSphere Portal. With the different adapters an enterprise information system can be connected to retrieve business relevant data.

An approval step can be also solved by using a business state machine.

As you can see there are many possibilities, each with its own graphical markup.

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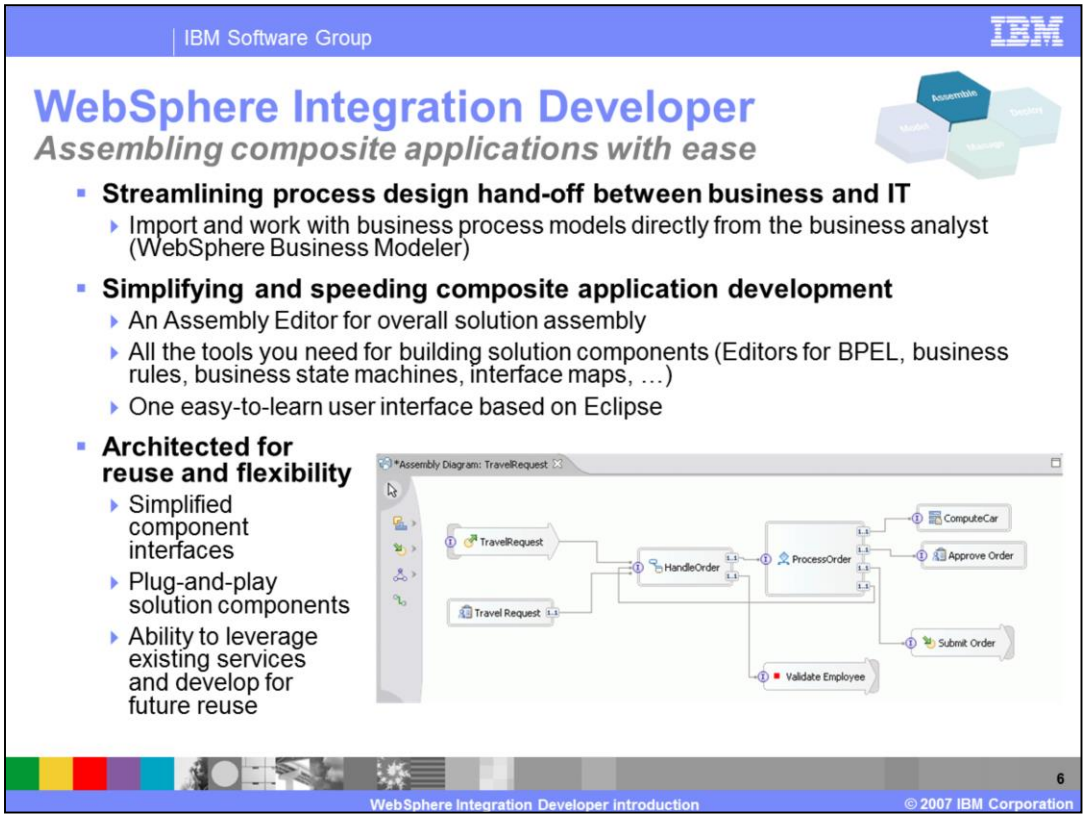


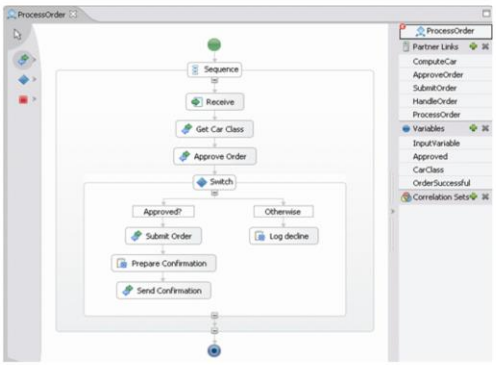
The WebSphere Integration Developer can work directly with the WebSphere Business Modeler. So the process models can be directly imported and implemented in the WebSphere Integration Developer.

Through the simple user interface, with all tools included of the WebSphere Integration Developer, you can speed up the composite application development. Also it is the same Eclipse usability and functionality for all tools, this makes the tools easier to learn and use.

WebSphere Integration Developer

BPEL without coding – Standards-based process support

- Import models from WebSphere Business Modeler
- Develop executable process
  - WS-BPEL-based business processes
  - WS-BPEL with or without IBM extensions
- Intuitive drag-and-drop tools
  - Visually define the sequence and flow of business processes
- A visual business process debugger
  - Step through and debug business processes
- Integrated fault and event handling
  - Provide an easy and integrated means of handling in-flow exception handling and external events
- Compensation support
  - Provide a logical "undo" capability



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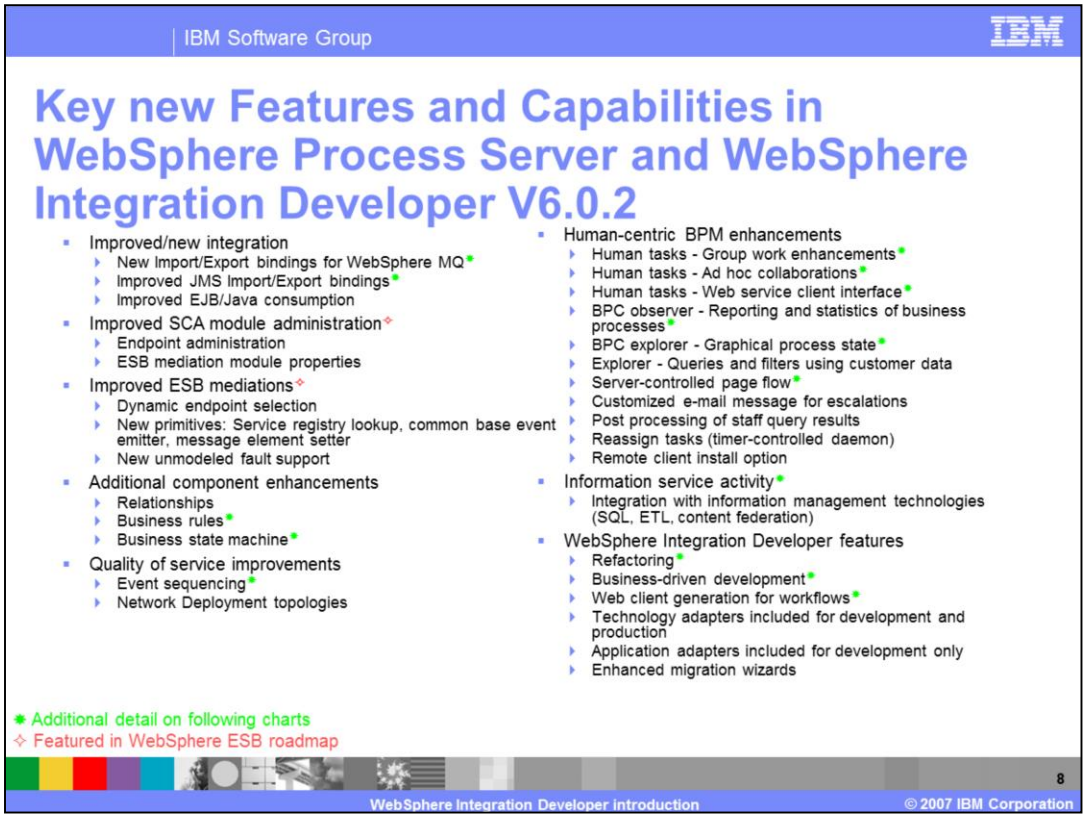
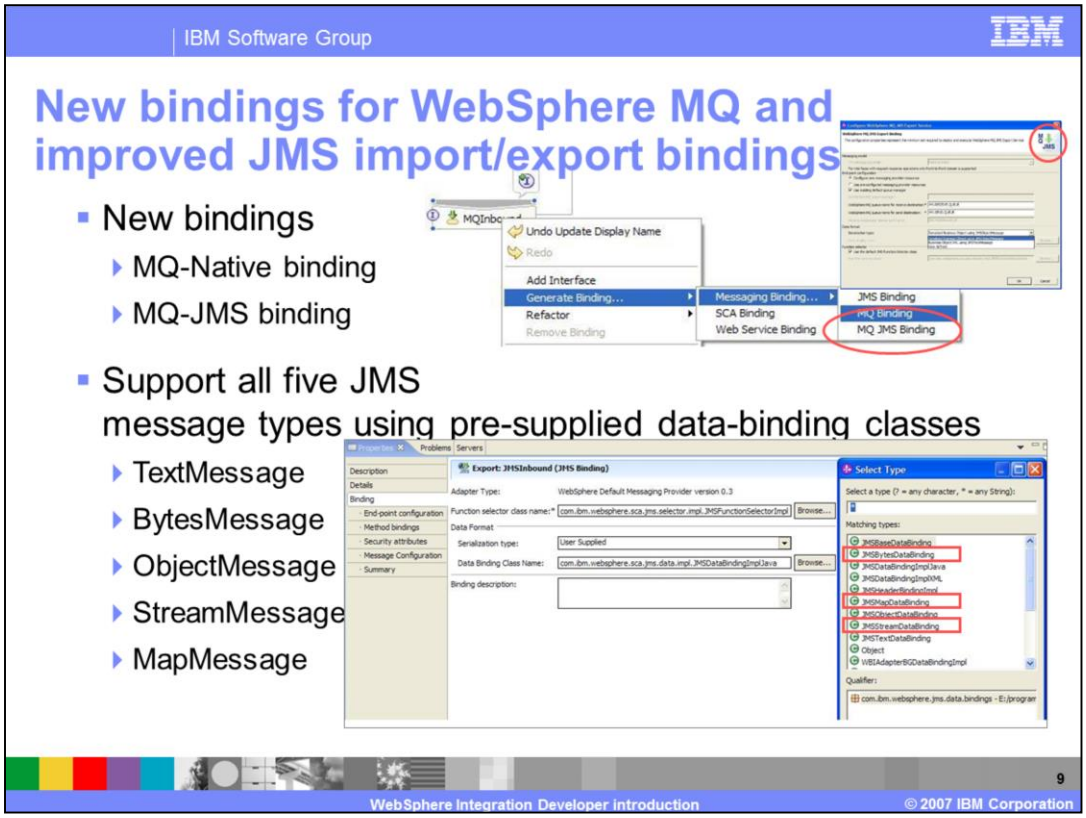
One of the powerful tools is the BPEL editor. You can use this tool to generate complex business processes without writing any code. Also you have several additional tools to help you in creation and debugging.



These are the new features shipped in version 6.0.2

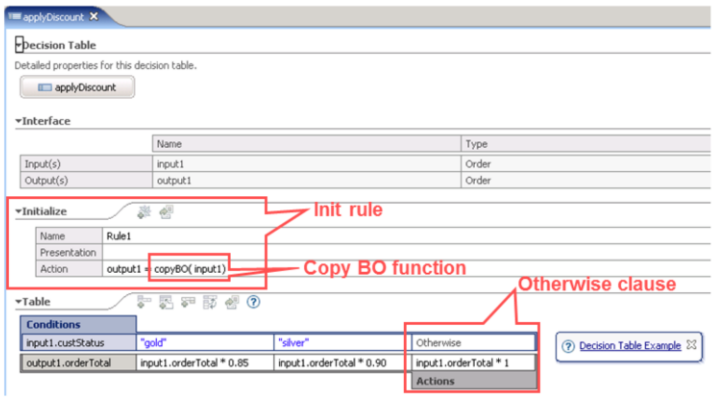
The items highlighted with green will be shown in more detail in the next few slides.



New bindings have been introduced. These new MQ-native and MQ-JMS bindings make it easier to work in a MQ environment. All five JMS message types are supported as well, so you can use the bindings with TextMessage, BytesMessage, ObjectMessage, StreamMessage and MapMessage patterns.

Business rule enhancements

- Added Copy Business Object function for ruleset actions
- Init rule can be specified for a decision table
- Otherwise clause can be specified on decision table conditions
- Added support for java.util.List APIs on Business Object list attributes
- Return option available in ruleset to force running of rule list to end early
- Import/export of business rules
- Audit support for rules enables recording of what was changed and by whom



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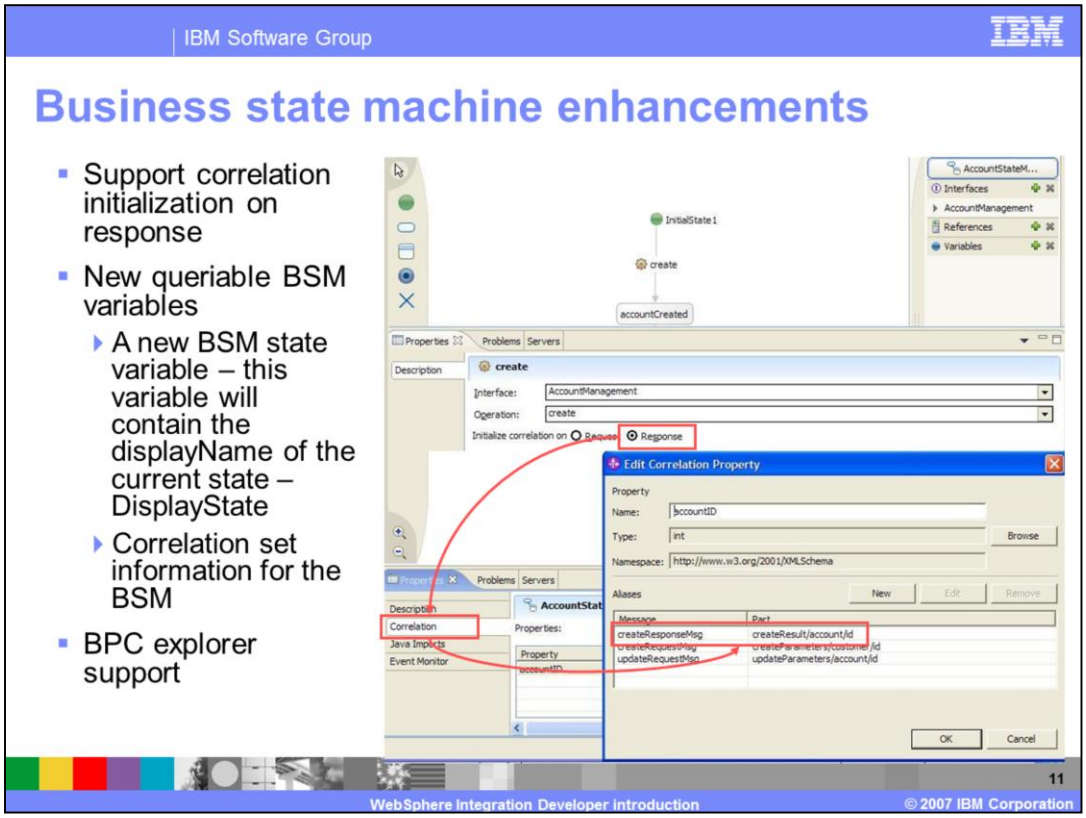
The support for business rules have been enhanced.

Business rules are used to have a Web-based opportunity to change values for the business process. And this without any Eclipse tools or re-deployment.

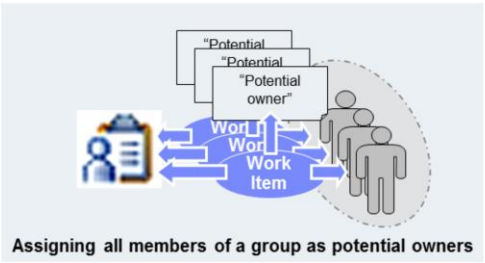


In the business state machine tools some enhancements about correlation have been included. There is also a new variable indicating the displayName and the current state.

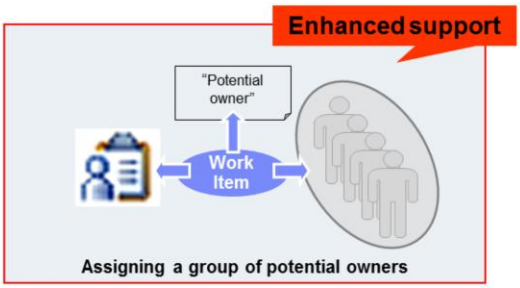
Human tasks – Enhanced support for groups

Manage task assignments on "per-group" basis rather than "per-individual"

- Work items are used to ensure authorizations when viewing data or performing actions
- A work item represents the relationship between three things:
  - An object
    - for example task, escalation, BPEL process or BPEL activity
  - An assignment reason
    - for example Potential owner, owner, reader or starter
  - A user ID or group
- Enhanced group support creates an individual work item per group



Assigning all members of a group as potential owners



Assigning a group of potential owners

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Human tasks are an IBM extension of the BPEL standard. Also other companies are working with IBM on this idea.

The big enhancement for this is that you can now assign a whole group as a potential owner for an activity. This makes a delegation process much easier.

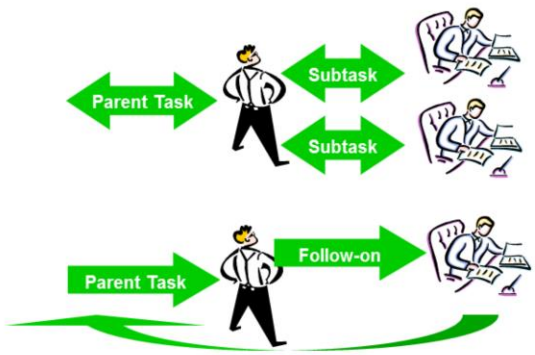
Human tasks – Ad-hoc collaboration

Subtasks

- Dividing a task into portions and then delegating to other persons
- Owner of parent task remains responsible for completion

Follow-on tasks

- Partially completing a task and then delegating the remaining work to another person
- Owner of follow-on task is responsible for completion



- Participating tasks and pure human tasks allow subtasks and follow-on tasks
- Subtasks and follow-on tasks can be nested
- Life cycle operations must be performed against the parent task

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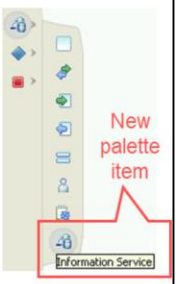
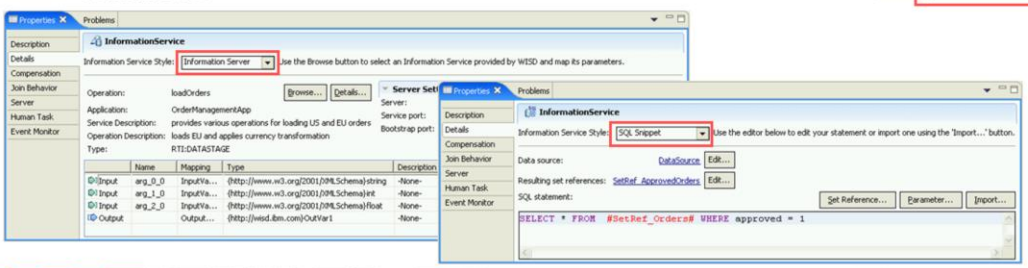
Also new in version 6.0.2 is the support to divide a task in several subtasks or to partially complete a task and then send the remaining parts to someone else as follow-on task.

Cross-product integration … information service activity

- New capabilities to access information services in business processes
  - Direct interaction with the Information Server platform, including discovery of operations and invocation
  - Direct access to relational database systems with support of full SQL
  - Use references to relational tables
  - Support for dynamic architectures by allowing very late binding of relational DBMS to activities and relational tables to SQL statements





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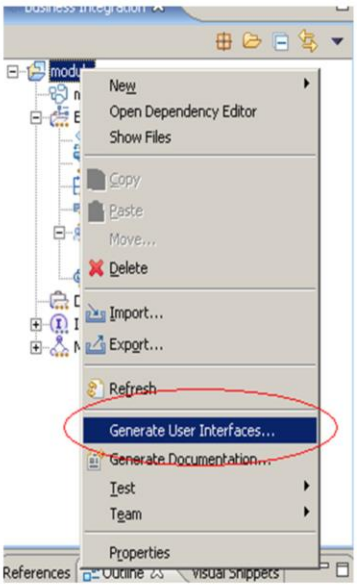
It is now possible to integrate directly with the information server; this enhances the “information as a service” idea.

Web client generation

A new wizard to generate client artifacts

- Create JSF/JSP-based client for ...
  - All (inline) human tasks of a process
  - All human tasks of a module (both stand-alone and inline)
  - Selected human tasks (across multiple processes, modules)
- Provides support for local or remote clients
- Generates JSF/JSP pages specific to selected tasks
- Ability to create new tasks through this client
  - Originating task (inline and stand-alone) This can for example start a business process, but also any other component
  - Human tasks only
- Ability to check status of processes (search criteria are custom properties of the process)



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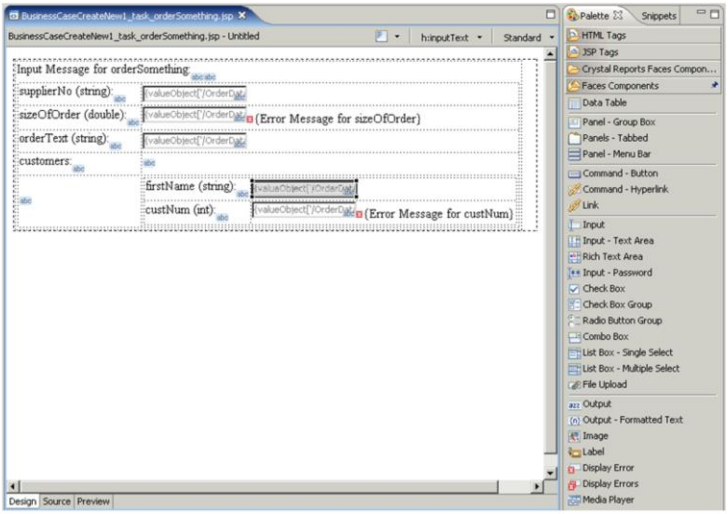
Also new in the 6.0.2 release is the possibility to create clients out of the human task definition just using a wizard. This is a fast and powerful option to get the human task portal ready.

Web client generation

Customizing the generated client

- Generated client code is JSF/JSP source code
  - Own Web project
  - Input fields, check boxes and combo boxes based on task input/output messages
- Rational Application Developer can be used to adapt the code and customize the generated client
- Use Cascading Style Sheets (CSS) to change appearance



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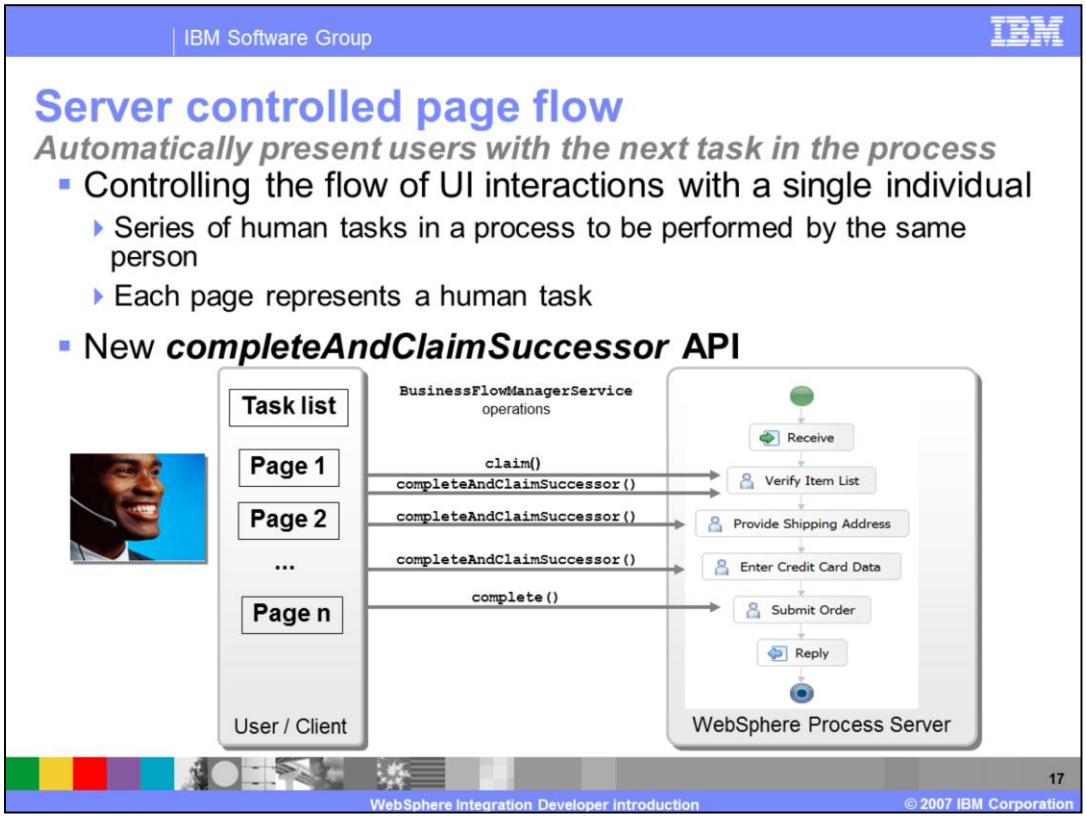
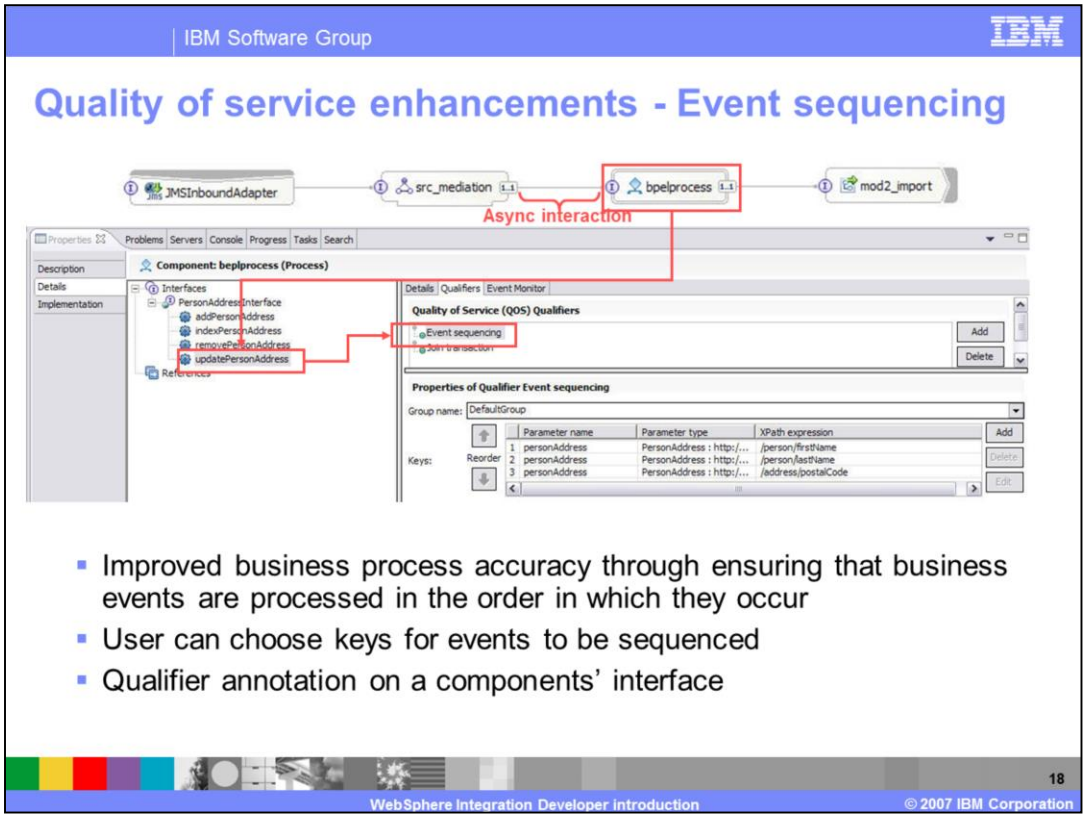
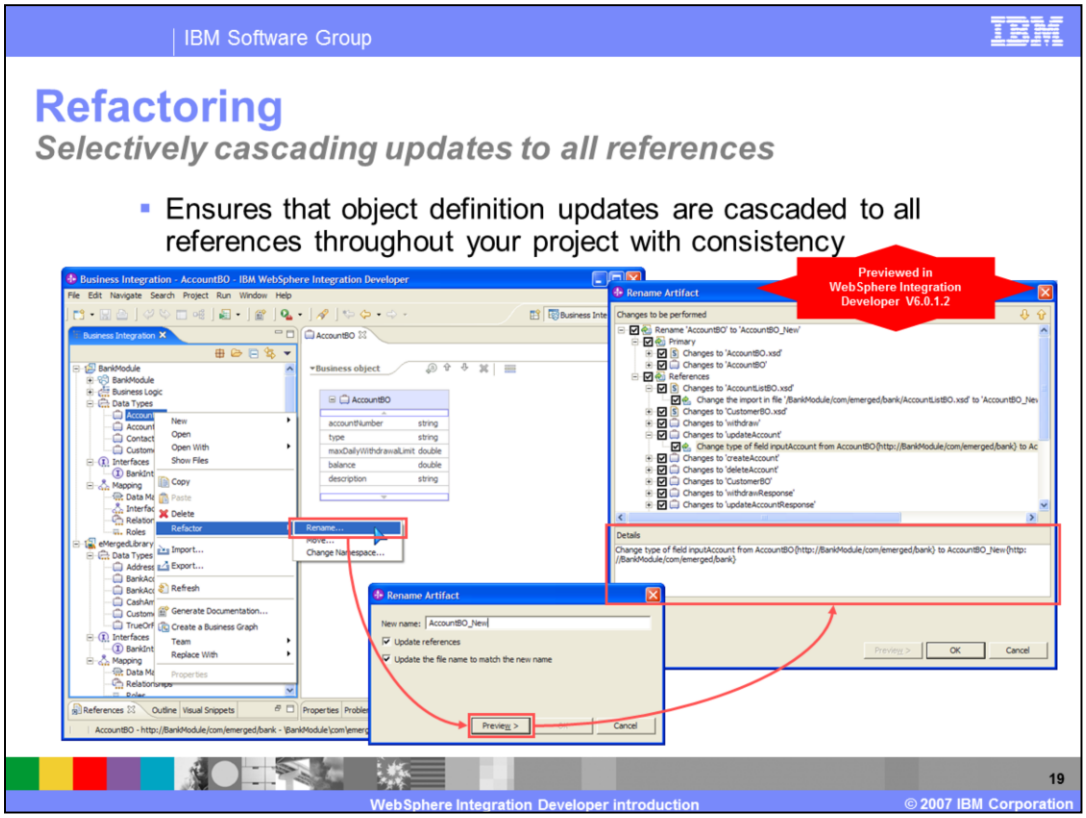
Now the tools can create an automatically generated client. This is much faster and easier then creating it on your own and it can be changed very easily because it is plain JSF/JSP source code.



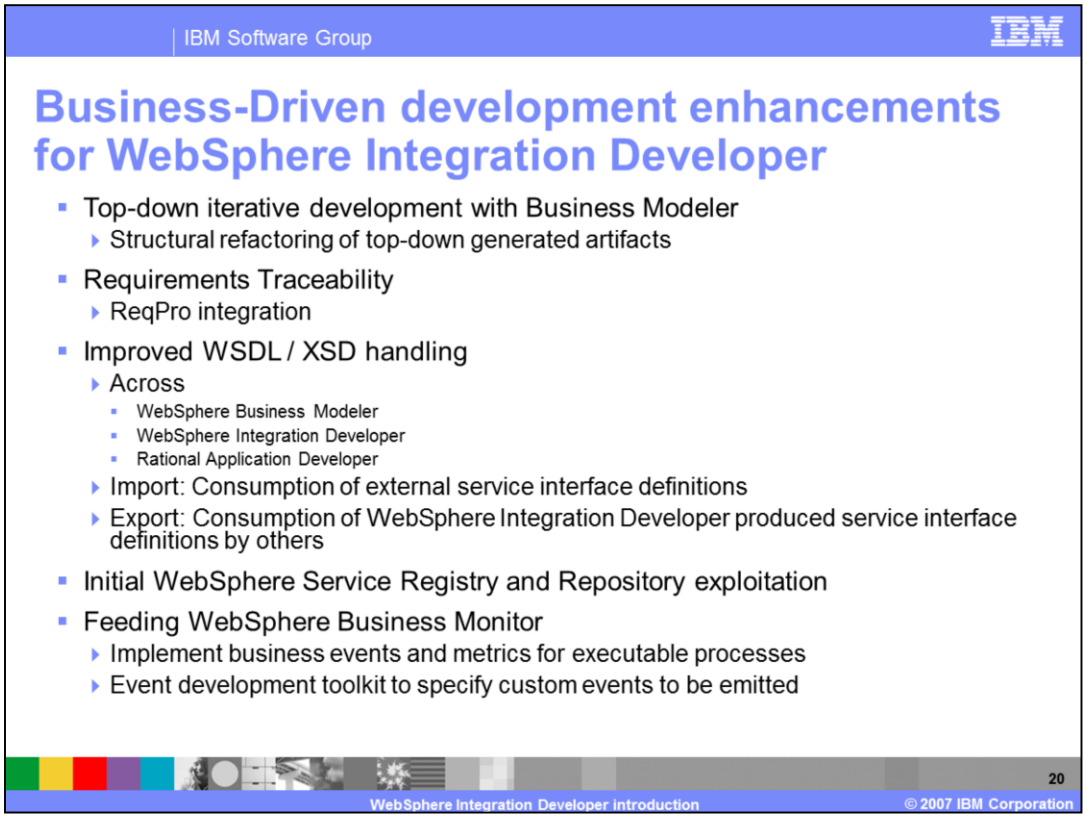
By using the human tasks in a BPEL process, you have the opportunity to create server controlled page flows.



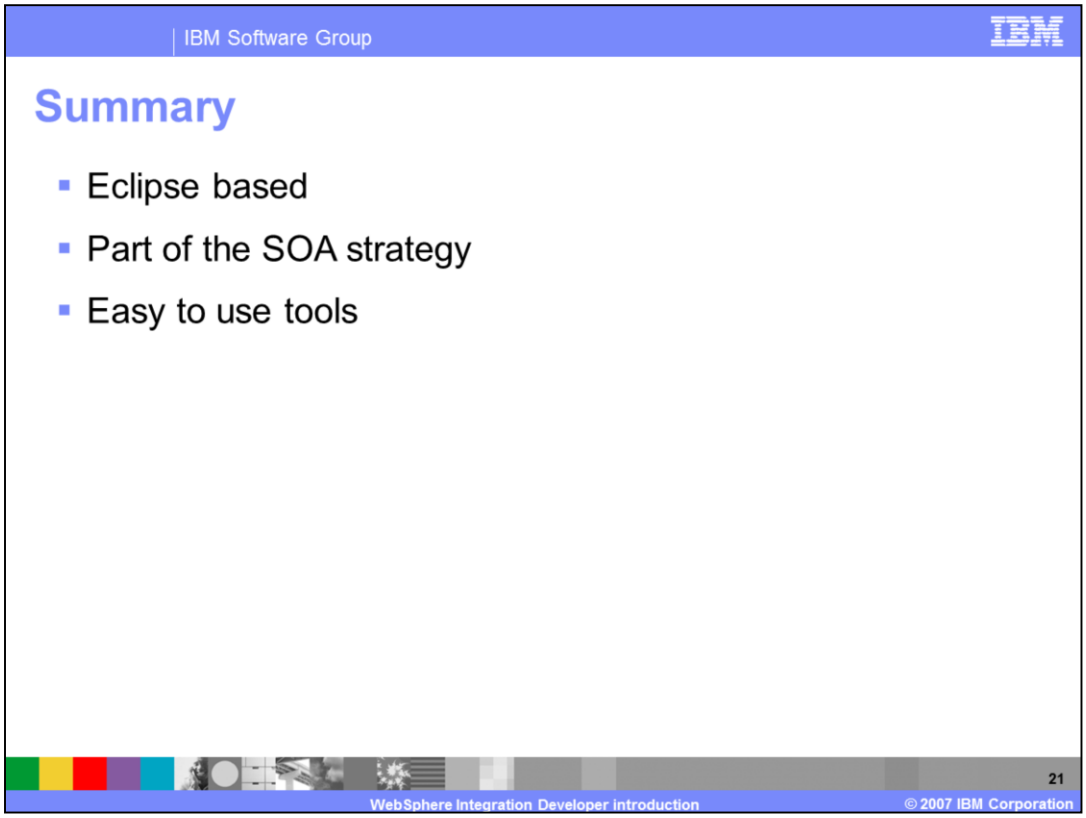
With a new option in the interface qualifiers, the event sequencing can be enabled. This takes care that all business events are processed in the order in which they occur.



The refactoring has also been enhanced. If you change a name of a component, it automatically checks all references and shows them in a list for synchronous change.



The last enhancements to be mentioned here are business driven. There are several enhancements to tie the IBM products closer together as you can see on this page.



In summary, you have seen that the WebSphere Integration Developer is an Eclipse-based tool and part of the SOA strategy.

The tools focus on business processes and offers a lot of wizards to make the process development easier.

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